

REMARKS

This amendment is in response to the Official Action dated December 27, 2004. Claims 1, 26 and 27 have been amended. Claims 1-28 remain in the application with Claims 1, 26 and 28 being the only independent claims. Favorable reconsideration, in view of the above amendments and accompanying remarks, is respectfully requested.

In the Official Action the Examiner has rejected Claims 1-3 and 7-28 under the provisions of 35 U.S.C. 102(b) as being anticipated by WO 99/37939. These rejections are respectfully traversed in light of the amendments to the claims and for the following reasons.

Claim 1 recites in part that the disc brake includes at least one force transducer disposed in a first force transmission path between the actuator device and at least one of the brake shoes, *wherein a maximum component of force acting upon the force transducer upon generating of the clamping force is limited* (emphasis added). None of the cited references, alone or in combination, discloses or suggests such a disc brake structure as recited in Claim 1.

First, it is noted that WO 99/37939 is completely silent with respect to any limited maximum component of force acting upon the force transducer. Apparently, the Examiner has presumed that the ends of the grooves 39' form a "stop" for limiting the force component applied to the pressure pad 36. However, as described in WO 99/37939 at page 5, lines 28-30 the 'pressure pad 36 has two parallel walls 41, connected at their circumference 42, e.g. by means of welding. The internal space enclosed between the parallel walls 41 is filled with a pressure medium 43, e.g. a hydraulic fluid.' Importantly, it is noted that hydraulic fluids such as fluid 43 contained within the pressure pad 36 are essentially incompressible. For this reason, all of the force (i.e., without limit) is applied through the pressure pad 36. In other words, the ends of the grooves 39 do not form a stop as suggested by the Examiner in the Official Action. Moreover, it is not clear if the actuator device in WO 99/37939 ever reaches the ends of the grooves 39', which has to be doubted because the pressure pad 36 is substantially incompressible. Thus, WO 99/37939 clearly does not disclose or suggest any limit of force acting upon the force transducer but rather teaches away

from this as the incompressible fluid 43 in the pressure pad 36 continues to bear the full force applied to the brake pads for the full range of operation of the brake actuator. Thus, WO 99/37939 clearly does not disclose or suggest a disc brake having at least one force transducer disposed in a first force transmission path between the actuator device and at least one of the brake shoes, *wherein a maximum component of force acting upon the force transducer upon generating of the clamping force is limited*, as recited in Claim 1 (emphasis added). Accordingly, it is believed that Claim 1, along with dependent Claims 2-25, are patentable over the cited references.

Independent Claim 26 includes similar subject matter and limitations as that found in Claim 1 and Claim 26 specifically recites in part that the disc brake includes a *force limiting assembly for limiting the force acting upon the force transducer upon generation of the clamping force* (emphasis added). None of the cited references discloses or suggest, alone or in combination, such a disc brake having a “force limiting assembly” as recited in Claim 26. Thus, for reasons similar to those discussed above with respect to Claim 1, it is believed that Claim 26 is patentable over the cited references.

Independent Claim 27 defines the invention as a disc brake and recites in part that the disc brake includes a first force transmission path arranged between the actuator and at least one of the brake shoes; a force sensing element disposed in the first force transmission path; and a second force transmission path arranged between the actuator and at least one of the brake shoes, the second force transmission path bypassing the force sensing element. None of the cited references, alone or in combination, discloses or suggests such a disc brake structure as recited in Claim 27.

Specifically, as described in WO 99/37939 beginning at page 5 line 31 through page 6 line 2, the design of the pressure pad 36 is such that if the brake pad 5 tilts somewhat during the braking action, thereby causing a misalignment between the axis of the piston 35 and the screw 24, the pressure pad 36 containing the hydraulic fluid 43 has the flexibility to accommodate this change in alignment, such that the screw 24 is still mainly loaded in the axial direction. Thus, WO 99/37939 only discloses that the pad 36 via the hydraulic fluid 43 has some flexibility to misalignment or tilting of

the brake pad 5. WO 99/37939 clearly does not disclose or suggest that the disc brake has a *first force transmission path* arranged between the actuator and at least one of the brake shoes; a *force sensing element disposed in the first force transmission path*; and a *second force transmission path* arranged between the actuator and at least one of the brake shoes, *the second force transmission path bypassing the force sensing element*, as recited in Claim 27 (emphasis added). Accordingly, it is believed that Claim 27, along with dependent Claim 28, are patentable over the cited references.

In view of the above amendments and accompanying remarks, it is believed that the application is in condition for allowance. However, if the Examiner does not believe that the above remarks and amendments to the claims place the application in condition for allowance, or if the Examiner has any comments or suggestions, it is requested that the Examiner contact Applicants' attorney at (419) 255-5900 to discuss the application prior to the issuance of an action in this case by the Examiner.